

CLAIMS

Sub B1
1. A vehicle having a profiled tread, having tread blocks (1) in at least some regions of its circumference, characterised in that for at least some of the tread blocks (1) at least the tread block edges (2) running into the tyre contact patch (11) and extending at an angle to the central plane of the tyre are lowered over their entire length with respect to the central plateau (3) of the respective tread block (1).

2. A vehicle tyre in accordance with claim 1, characterised in that the contour of the tread block boundary surface (6) extending from the start (4) of the lowering preferably up to the base, of the groove extends in section planes parallel to the central plane of the tyre in the form of an extended S-curve.

3. A vehicle tyre in accordance with claim 2, characterised in that the turning point of the S-curve is disposed in the lower third of the tread block height.

Sub B1
4. A vehicle tyre in accordance with claim 1, characterised in that the contour of the tread block boundary surface (6) extending from the start (4) of the lowering, preferably up to the groove base (5), extends in section planes parallel to the central plane of the tyre in accordance with an exponential function.

5. A vehicle tyre in accordance with claim 4, characterised in that the exponential function is defined by the formula

$$y = a(1 - e^{-t/\tau}) + b$$

with the parameters a, b, τ being freely selectable and defined by the associated Figures.

Sub A1
6. A vehicle tyre in accordance with one of the preceding claims, characterised in that the tread block edges running out of the tyre contact patch are formed analogously to the entry edges.

Sub B1
7. A vehicle tyre in accordance with claim 6, characterised in that the profiles of the entry and run-out boundary surfaces (6) of the tread blocks, which each at least substantially follow an exponential function in shape are designed differently with respect to their shape and/or inclination.

8. A vehicle tyre in accordance with claim 7, characterised in that the run-out boundary surfaces (6) extend more steeply than the entry boundary surfaces.

Sub A2
9. A vehicle tyre in accordance with one of the preceding claims, characterised in that the tread block plateau disposed between the entry side and exit side lowerings amounts to approximately 20% to 80% and preferably about 30% to 50% of the block length.

10. A vehicle tyre in accordance with one of the preceding claims, characterised in that the tread block plateau (3) between the start of the entry side and exit side lowering is rectangular or trapezium-shaped in plan view.

11. A vehicle tyre in accordance with one of the preceding claims, characterised in that the steepness of the entry side and/or exit side tread block boundary surface (6) differs over their width.

12. A vehicle tyre in accordance with one of the preceding claims, characterised in that the depth of the grooves (7) which separate the tread blocks (1) from one another in the circumferential direction of the tyre differs in a pre-determinable repetition sequence.

Sub B1
13. A vehicle tyre in accordance with claim 12, characterised in that a groove (7) of pre-determinable depth is respectively followed by a groove (7) of smaller depth, with a change preferably being provided between a groove (7) of full depth and a groove of half depth.

Sub A3
14. A vehicle tyre, in particular in accordance with one of the preceding claims, characterised in that the groove angle in the tread entry is disposed in the range between 15' and 25' and the tread run-out angle is disposed in the range from 0' to 13'.

Sub B1
15. A vehicle tyre in accordance with claim 14, characterised in that at least the entry side tread block boundary surface (6) is formed substantially as an essentially flat inclined surface starting from the base of the groove which merges in the upper quarter of the tread block height via a pre-determinable radius or a broken entry edge into the tread block plateau (3).